Hazard Communication

Introduction/Overview

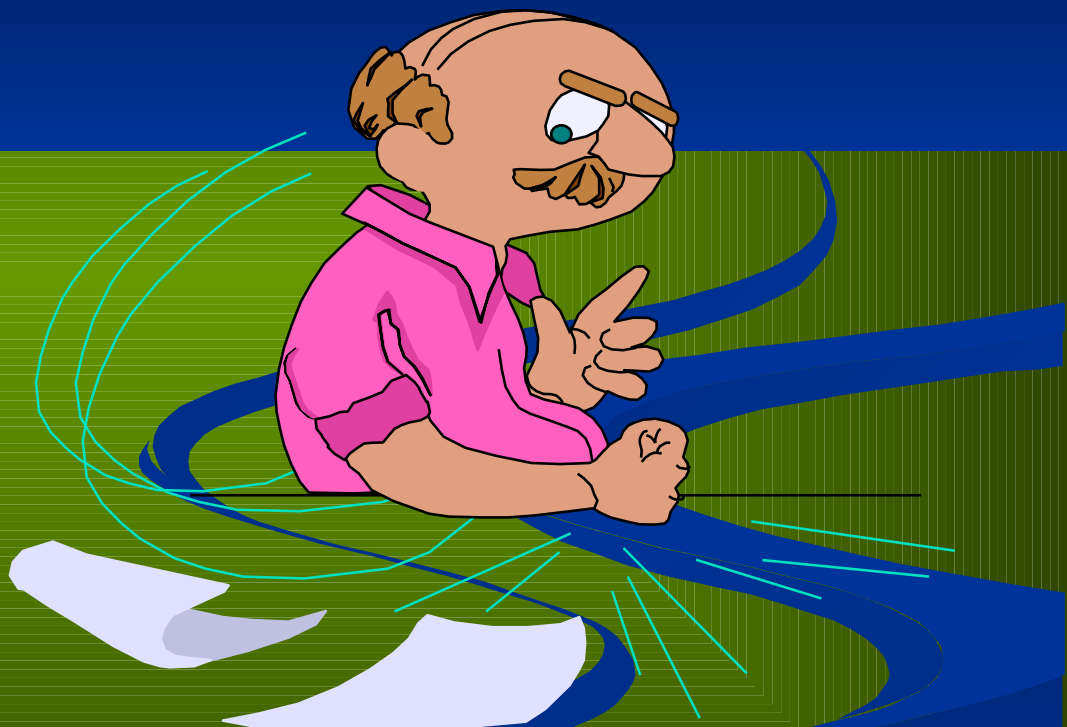
- The OSHA Hazard Communication Standard
- The Components Of The HazCom Standard
- Hazards of Chemicals
- Personal Protection
- Work Practices

Reference

- 29 CFR 1910.1200, Occupational Safety and Health, Hazard Communication Standard
- DoD Instruction 6050.5, DoD Hazard Communication Program
- 29 CFR 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories

Why Do I Need HAZCOM?

- Regulatory Requirement
- To Inform You Of Occupational Hazards



The Army's HAZCOM Program

- Applies to all Department of the Army personnel who have potential on-the-job exposure to hazardous chemicals. This applies to full time, part time, temporary, and voluntary personnel.

The Army's HAZCOM Program

- **Does not apply to:**
  - **Contract employees at Government Owned Contractor Operated (GOCO) are covered by their own HAZCOM programs**
  - **Exposure outside of the occupational setting**

HAZCOM Program

- **Exclusions (products and operations) from the HAZCOM standard include:**
  - **Hazardous Waste defined by the Solid Waste Disposal Act and amended by the Resource Conversation and Recovery Act; and hazardous waste regulated by the EPA**

HAZCOM Program

- Exclusions (cont.)
  - Tobacco or tobacco products
  - Article
  - Wood or wood products

HAZCOM Program

- Exclusions (cont.)
  - Food, drugs, cosmetics, or alcoholic beverages in retail establishments which are packaged for sale to consumers
  - Food, drugs, cosmetics intended for personal consumption by employees while in the workplace

HAZCOM Program

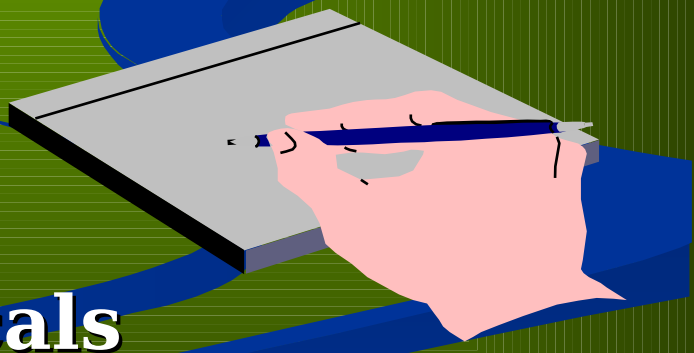
- Exclusions (cont.)
  - Consumer products
  - Nuisance particles
  - Ionizing and non-ionizing radiation
  - Biological hazards

Components of HAZCOM Standard

- Written Program
- Hazardous Chemical Inventory
- Material Safety Data Sheets (MSDSs)
- Labeling Of Containers
- Training Of Employees

Local Written Program

- List of hazardous chemicals
- Method used to inform employees of the hazards of non-routine tasks
- Location of MSDSs
- Information on labeling chemicals



Hazardous Chemical Inventory

- Listing of all hazardous chemicals
- May cover the workplace as a whole or for individual work areas
- No specific format is required

Material Safety Data Sheets

The MSDS is a document which describes

- **The physical and chemical properties of products**
- **The physical and health hazards**
- **Precautions for safe handling and use**

Material Safety Data Sheets

- A MSDS must be maintained for each hazardous chemical on the inventory
- Employees must have unrestricted access to MSDSs at all times while at the worksite

Material Safety Data Sheets

- The manufacturer must provide a MSDS with the first shipment and anytime it is updated
- No standardized format
- MSDSs must be available in plain language

Material Safety Data Sheets

Regardless of the format, the following information is required:

- **Chemical Identity**
- **Hazardous Ingredients**
- **Physical and Chemical Characteristics**
- **Physical Hazards**
- **Health Hazards**
- **Special Precautions**
- **Control Measures**
- **Emergency and First Aid**
- **Responsible Party**

Chemical Identity--chemical, trade name and common name(s).

Material Safety Data Sheets

- Chemical Identity
- **Hazardous Ingredients**
- Physical and Chemical Characteristics
- Physical Hazards
- Health Hazards
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Hazardous Ingredients--all ingredients that are not carcinogens but are health or physical hazards and comprise 1% or more of the mixture must be listed; carcinogens must be listed if they are present in mixture at levels of 0.1% or greater; physical hazards must be listed.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- **Physical and Chemical Characteristics**
- Physical Hazards
- Health Hazards
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Physical and Chemical Characteristics--boiling and freezing points; density; vapor pressure; specific gravity; solubility; volatility; general appearance; and, odor.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- **Physical Hazards**
- Health Hazards
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Physical Hazards--conditions under which product could ignite or explode; recommended extinguishing agents and fire fighting methods; chemical incompatibilities; and, decomposition products.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- Physical Hazards
- **Health Hazards**
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Health Hazards

Includes carcinogenicity, corrosiv toxicity, irritants, sensitizers, and organ effects such as liver, kidney nervous system, blood, lung, muc membranes, reproductive, skin, a eye effects.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- Physical Hazards
- Health Hazards
- **Special Precautions**
- Control Measures
- Emergency and First Aid
- Responsible Party

Special Precautions, Spill, Leak, and Cleanup Procedures--precautions for safe handling and use; industrial hygiene practices; precautions to be taken; during maintenance and repair of equipment; EPA waste disposal methods; and State and Local requirements.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- Physical Hazards
- Health Hazards
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Control Measures-- engineering controls; safe handling procedures; and, personal protective equipment.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- Physical Hazards
- Health Hazards
- Special Precautions
- Control Measures
- **Emergency and First Aid**
- Responsible Party

Emergency and First A… Procedures--actions t… be taken in case of accid…enta… overexposure.

Material Safety Data Sheets

- Chemical Identity
- Hazardous Ingredients
- Physical and Chemical Characteristics
- Physical Hazards
- Health Hazards
- Special Precautions
- Control Measures
- Emergency and First Aid
- Responsible Party

Responsible Party--MSDS preparation date or date of last change; name; address and telephone number of responsible party preparing or distributing the MSDS

How Do I Identify Hazardous Products?

- Look at the label for words like
  - Caution, Danger, Flammable, Harmful, Irritant or Corrosive
- Talk with your supervisor and/or safety representative

Labeling Containers

Manufacturers' responsibility

- **Determining the hazards of the chemical**
- **Labeling all hazardous chemicals**

Labeling Containers

User's responsibility - Label container when product is transferred to another container and:

- **Is used by more than one person**
- **Remains in the work area longer than one work shift**
- **The container is left unsupervised**

Training Requirements

- Prior to working with hazardous chemicals
- When a new procedure or chemical is introduced
- Before performing non-routine task
- Site specific training
- Annual refresher training is recommended

Training Requirements

Employees must be informed of:

- **Requirements of the HAZCOM Program**
- **Operations where hazardous chemicals are used**
- **Location & availability of MSDSs & plan**

Training Requirements

Training must include:

- **Method to detect presence of release**
- **Physical and health hazards**
- **Measures for personal protection**
- **Details of the local plan**

Training Requirements

- Site specific training topics
  - Details of the plan
  - Potential hazards
  - Labeling system
  - Precautions for safe use

Training Requirements

- Personal protective equipment and control devices
- Exposure symptoms and emergency first aid
- Waste disposal instructions

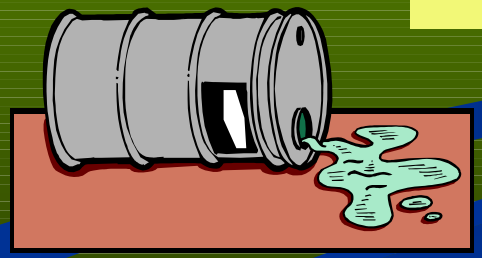
Hazards of Chemicals

The first rule of chemical safety is…
“Know what you are working with and how to protect yourself and others”.

Hazards of Chemicals

There are 2 basic types of hazards

- **Physical Hazards**
- **Health Hazards**



Hazards of Chemicals

Physical Hazards

Explosives

Flammable liquids

Compressed gases

Corrosives

Oxidizers

Pyrophoric

Hazards of Chemicals

Health Hazards

Toxic **Irritants**

Carcinogen Sensitizers

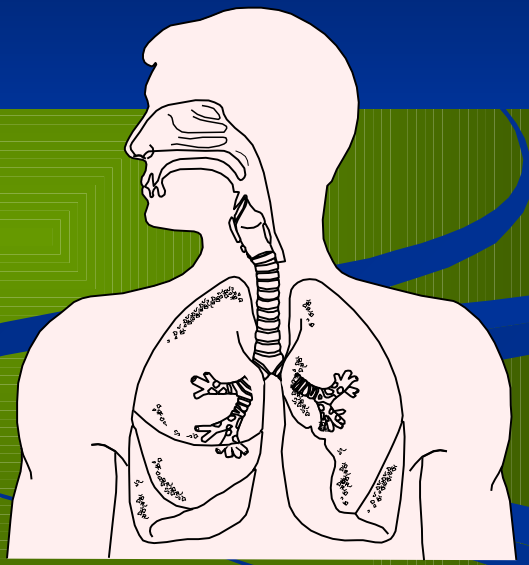
Corrosive **Target Organs**

Hazards of Chemicals

Lungs if you breath fumes, mists or dust

Skin if liquid or dust touches or spills on you or splashes in your eyes

Mouth if you eat after handling chemicals



FAQs

What if there is no label or I cannot read the label?

STOP - do not use the chemical

TELL your supervisor

READ the MSDS and re-label the container

FAQs

How do I know if a chemical is safe to use?

Chemicals can be used safely if...

- you know the hazards and how to protect yourself
- they are used only for approved purposes

FAQ’s

- Use the correct personal protective equipment,
  work practices and other engineering controls
- Do not eat in areas where chemicals are used
- Wash immediately if you come in contact with
  chemicals

FAQ’s

What do I need to know about chemical disposal?

- **Each chemical and container must be disposed of properly**
- **No container is truly "empty" unless properly cleaned**
- **Follow MSDS requirements for container disposal**

FAQ’s

- Recycle unused chemicals whenever possible
- Do not place hazardous chemicals in normal trash receptacles
- Do not pour chemicals into sinks, onto the ground or in storm drains

FAQ’s

What do I need to know for safe storage of chemicals?

- **Store incompatible chemicals in separate areas**
- **Limit the amount of flammable material to the minimum needed**
- **Store flammable liquids in approved flammable storage lockers**

FAQ’s

- Store acids in separate flammable storage lockers.
- Do not store chemicals in a refrigerator used for food storage.
- Do not store food in refrigerators used for chemical storage.

FAQ’s

What do I do in case of an emergency?

- Implement the proper Emergency Action Plan
- Evacuate people from the area

FAQ’s

- Isolate the area and keep others from entering
- Turn off ignition and heat sources
- Only trained employees are permitted to clean up
  spills

FAQ’s

How do I protect myself?

- Use face shield and goggles if there is a splash hazard
- Use the proper respirator for dusts, mists and fumes
- Use the right gloves when handling chemicals

FAQ’s

- Properly clean and store your PPE after use
- Don't take PPE home - Why risk exposing your family?
- Know what you are working with

FAQ’s

- Know where MSDS are located and how to use them
- Ask your supervisor if you have questions
- Only trained employees may use chemicals

FAQ’s

- Make sure all containers are properly labeled
- Use the proper protective equipment
- Store chemicals only in approved areas

FAQ’s

- Immediately report leaks and spills
- Dispose of used chemicals and containers properly

Finished

For more information on this topic and other safety topics go to the Installation Safety page on the Fort Sill Intranet or call 442-4215 the Safety staff will be more than happy to help you any way they can.